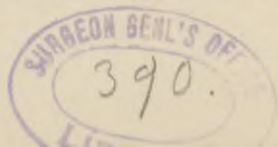


BOTANY AT THE ROCHESTER MEETING OF THE
AMERICAN ASSOCIATION FOR THE AD-
VANCEMENT OF SCIENCE.

This meeting of the A. A. A. S. may doubtless be recorded as the most important, from a botanical standpoint, of the entire series. Up to the present time the botanical work proper of the Association has been performed as a part of the proceedings of Section F., Biology. The facilities thus offered were long ago found to be unsatisfactory to the visiting botanists, and they established the "Botanical Club of the A. A. A. S.," in which the more strictly botanical interests received special attention. Notwithstanding this, which might be denominated as an "overflow" provision, the botanists have found themselves becoming more and more cramped for time and facilities, and during the past year it was determined to make an effort to have a separate Section on Botany established. When the question was proposed at the Rochester meeting, the objection was made that the papers on zoology would probably not be sufficient to occupy the time of the session. It was also objected that many biological papers could not properly be referred to zoology or to botany. These objections were met by proposing that the two sections should hold one or more joint sessions at each meeting for the consideration of such papers. After a careful canvass the arrangement was made, and at the next meeting of the Association there will be both a Section in Botany and one in ^{BF}Biology. The Botanical Club will still be continued, and it is not doubted that the papers presented will be sufficient to fully occupy the time of both organizations. Although the botanical papers read, both

Presented by
H. H. Rusby. }
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in the Biological Section and in the Botanical Club, were of much interest and value, it is fair to say that their combined importance was not so great as that of the action of the Botanical Club in reference to botanical nomenclature, of which a special report will be found below. The botanical papers read at this meeting are enumerated, as follows :

BEFORE THE BIOLOGICAL SECTION.

Notes on *Ranunculus repens* and its Eastern North American allies, by N. L. Britton.

Notes on a monograph of the North American species of *Lespedeza*, by N. L. Britton.

The Root System of *Mikania scandens*, by W. W. Rowlee.

Preliminary comparison of the Hepatic Flora of Boreal and Sub-boreal regions, by L. M. Underwood.

Notes on Maize, by G. Macloskie.

Spikes of Wheat bearing abnormal spikelets, by W. J. Beal.

A study of the relative Lengths of the Sheaths and Internodes of Grasses, for the purpose of determining to what extent this is a reliable specific character, by W. J. Beal.

Adaptation of Seeds to facilitate Germination, by W. W. Rowlee.

Bacteriological Investigations of Marine Waters and the Sea Floor, by H. L. Russell.

Sketch of the Flora of Death Valley, California, by F. V. Coville.

How the application of Hot Water to Seed Increases the Yield, by J. C. Arthur.

Heredity of Acquired Characters, by M. Miles.

On the supposed Correlation of Quality in Fruits—a study in evolution, by L. H. Bailey.

Non parasitic Bacteria in Vegetable Tissue, by H. L. Russell.

Notes on Yellow Pitch-pine—*Pinus rigida*, Mill., var. *lutea*, Kell. n. v., by W. A. Kellerman.

Germination at Intervals of Seeds treated with Fungicides, by W. A. Kellerman.

The Fertilization of Pear Flowers, by M. B. Waite.

The Fertilization of the Fig and Caprifigation, by C. V. Riley.

A comparative study of the Roots of Ranunculaceæ, by F. B. Maxwell (presented by W. R. Dudley).

The Conditions which determine the Distribution of Bacteria in the Water of Rivers, by J. H. Stoller.

Notes on *Daucus Carota*, by C. W. Hargitt.

Geographic Relationship of the Flora of the high Sierra-Nevada, California, by F. V. Coville.

Variation in Native Ferns, by W. M. Beauchamp.

Life-for-ever Eradicated by a Fungous Disease, by D. G. Fairchild.

Otto Kunze's Changes in Nomenclature of North American Grasses, by G. Vasey.

Revised Nomenclature of the Arborescent Flora of the United States, by B. E. Fernow and G. B. Sudworth.

Characteristics and Adaptations of Desert Vegetation, by F. V. Coville.

Shrinkage of Woods as observed under the microscope, by F. Roth.

Peziza sclerotium, by L. H. Pammel.

Temperature and some of its Relations to Plant Life, by L. H. Pammel.

Pleospora of *Tropæolum majus*, by B. D. Halsted.

Secondary Spores of Anthracnoses, by B. D. Halsted.

A Bacterium of Phaseolus, by B. D. Halsted.

The Significance of Cleistogamy, by T. Meehan.

BEFORE THE BOTANICAL CLUB.

The use of the terms Range, Locality, Station, and Habitat, by F. V. Coville.

Travels in Paraguay, and its Flora, by Thomas Morong.

A variety of *Polypodium vulgare*, L., new to America, by L. M. Underwood.

Symbiotic Growths in the Roots of Ranunculaceæ, by F. B. Maxwell (presented by W. R. Dudley).

Some rare and interesting Fungi from Florida, by W. T. Swingle.

Anatomy as a Special Department of Botany, by Dr. Emily L. Gregory.

Observations upon certain species of Asclepiadaceæ as Insect Traps, by Thomas Morong.

[Dr. Beal offered the following resolution at this point: *Resolved*, That a vote of thanks of the Botanical Club be extended to E. B. Southwick, Botanist of the Central Park, New York, for his very interesting exhibit of some sixty or more species of fruits and nuts, including their branches and leaves.—The resolution was unanimously accepted.]

General notes on the Cryptogamic Flora of Liberia, by O. F. Cook.

On the proposed Hand-book of Mosses of Eastern America, by Mrs. E. G. Britton, and Claypole.

Weeds and Weed Roots, by B. D. Halsted.

The Re-discovery of *Juncus Cooperi*, by F. V. Coville.

The North American Amelanchiers, by N. L. Britton.

A New Form of Root Cage, by J. C. Arthur.

The Botanical Garden Movement in New York, by N. L. Britton.

A few Additions to the Hepatic Flora of the Manual Region, by L. M. Underwood.

On the genus *Campylopus* in North America, by Mrs. E. G. Britton.

Note on a recent Outbreak of Peach Yellows near Ann Arbor, Mich., by A. A. Crozier. The speaker adduced evidence to prove the communicability of the disease.

Some observations on *Epigæa repens*, by W. P. Wilson.

Notes on some species of *Cratægus*, by N. L. Britton.

Observations on the Ripening of the Seeds of Cuphea, by Mrs. H. L. T. Wolcott.

Notes on the Mountain Flora of Northern Alabama, by Chas. Mohr.

Some general questions in the Classification of Myxomycetes, by O. F. Cook.

North American Cacti, by J. M. Coulter.

Cultivated Species of Brassica, by L. H. Bailey.

Notes on the Distribution of Plants in Florida, by P. H. Rolfs.

Notes on some Fungi common during the season of 1892 at Ames, Iowa, by L. H. Pammel.

Notes on some Kansas Weeds, by A. S. Hitchcock.

Notes on the Flora of Block Island, by W. W. Bailey.

Notes on the Distribution of a few Plants, by I. H. Pammel.

Phænological Notes for 1892, by L. H. Pammel.

Observations on the North American species of Orchidaceæ, and their Nomenclature, by Thomas Morong.

Some noteworthy Features of the Flora of West Virginia, by C. F. Millspaugh.

On the genus *Ditrichum* in North America, with one new Western species and corrections for two Eastern species, by Mrs. E. G. Britton.

Notes on Terminology, by Theo. Holm.

Notes upon a Revision of the North American Naiadaceæ, by Thomas Morong.

Notes on some Pear and Apple Diseases, by M. B. Waite.

Modifications of the Tomato Plant resulting from Seed Selection, by E. S. Goff.

Some of the rare Mosses of White Top and vicinity, recently collected on a trip to Southwestern Virginia, by Mrs. E. G. Britton.

Galvanotropism, by J. C. Arthur.

A Botanical Terminology, by A. A. Crozier.

A proposed collection of Mosses of New York State for the Columbian Exposition, by Mrs. E. G. Britton.

Climbing Habit of *Tillandsia usneoides*, by W. P. Wilson.

H. H. RUSBY.

NORTH AMERICAN BOTANISTS AND BOTANICAL NOMENCLATURE.

BY H. H. RUSBY, M. D.

The past few years, during which the question of botanical nomenclature has been strongly agitated and earnestly, and I might almost say hotly, discussed, with the result of at least a partial agreement upon uniformity in certain directions, must be regarded as one of the important eras in the history of botany. The part which the American botanists have taken in this movement has been a prominent one. For the recent revival of interest in the subject in this country, and to a considerable extent abroad, Prof. Edward Lee Greene of the University of California is chiefly responsible. At the time when he began his earnest endeavor to induce his associates to take up this question, there seemed very little hope indeed that any satisfactory result could be reached; but his persistence and ability, and the importance of his own botanical work, which was carried out upon the principles espoused by him, to a certain extent compelled attention. Directly opposed as were those principles to the position maintained by the Cambridge botanists (to say nothing of some abroad), the immense influence of the latter—^{in this country} representing a very large and almost blind and irrational following—was thrown against Prof. Greene; and the feeling manifested, and the methods

resorted to to suppress him, were such as to form a disagreeable page of our history. A less courageous and devoted man would have succumbed to so strong and almost violent an opposition. Fortunately, Prof. Greene was early joined in his defense of principle and plea for system by Prof. N. L. Britton, of Columbia College, and several other American botanists. In spite of numerous protestations to the effect that the science of botany was being neglected for the subject of nomenclature, the discussion grew in extent and intensity until all the active botanists in the country, without exception, became awakened to the importance of the subject. The resulting literature forms an important part of the contents of the current numbers of *Pittonia*, the publications of the California Academy of Science, the *Bulletin of the Torrey Botanical Club*, and the *Botanical Gazette*, as well as of the *Journal of Botany* and other foreign publications. In a recent paper on the botanical names of the U. S. Pharmacopœia (BULLETIN OF PHARMACY, July, 1892) I referred to some of the more important points in dispute, touched upon the positions of influential botanists concerning them, and enunciated the principles which at that time were considered to be binding, and upon which that revision was founded. Since that time, however, most important developments have occurred, and the discussion in some particulars has culminated in action which must be regarded as official. This is especially true as regards American usage. The history of these recent developments may be given as follows:

In 1891 Dr. Otto Kunze published his great *Revisio Genera Plantarum*, in which he reviewed all the generic names of Bentham and Hooker's *Genera Plantarum*, indicating, besides a great many palpable errors, all those

instances in which such names violated the principles of nomenclature which Dr. Kunze defended, and which were based upon the rules of the Paris Congress of 1867. This work has been most critically reviewed again and again in all directions, and it is not my purpose to speak of its merits or demerits. Neither can I touch upon the principles employed in it, excepting such as have a direct relation to subsequent action of an official character. The important points were:

(1) The taking of the first edition of Linné's *Genera*, of the year 1735, as the starting-point for genera, and the first edition of his *Species*, of the year 1753, as the starting-point for species.

(2) The invariable adherence to these dates; that is, the refusal to make exceptions for any cause, except such as were rendered necessary by a consideration of other portions of the code.

Although these principles (except 1737 for 1735) were the very ones for which the advocates of correct systematic nomenclature had been all along contending, the publication of Dr. Kunze's book produced an almost violent reaction against them. Probably no one, not even Dr. Kunze himself, had foreseen the vastness of the number of changes which obedience to these rules would involve; and which became apparent upon the publication of the work. Several thousand changes in generic, I believe, and innumerable changes in specific, names were found to be involved. The effect of all this would probably not have been so serious but for the peculiar, and from my point of view unscrupulous, manner in which Dr. Kunze made his name appear as the author of the new combinations. The result was that all those who were

not infuriated were appalled, except probably Prof. Greene, "whom nothing could appall." The reaction against the proceeding took the form of the following circular which was distributed to the principal botanists of the world.

PROPOSITIONS TO AN AMENDMENT OF THE "LOIS DE NOMENCLATURE BOTANIQUE."

Since the time of Linnæus, botanists have continually endeavored to gain a uniform nomenclature, and these endeavors were completely justified on account of an easier mutual understanding. We know very well that certain differences will always remain, because the decision on some questions only depends on the author's subjective opinion. But we hope that a gradual and continual reformation will bring an essential improvement. O. Kunze's *Revisio Generum* has raised an evident perturbation, and will cause a complete confusion; therefore we thought it necessary to propose the following four resolutions, which refer only to the genera:

1. *The starting-point of the priority of the genera as well as the species is the year 1752, resp. 1753.*

2. *Nomina nuda and seminuda are to be rejected. Pictures alone without diagnoses do not claim any priority of a genus.*

3. *Similar names are to be conserved, if they differ by ever so little in the last syllable; if they only differ in the mode of spelling, the newer one must fall.*

4. *The names of the following larger or universally known genera are to be conserved, though after the strictest rules of priority they must be rejected; in many of them the change of the names now used is by no means sufficiently proved.*

Ad. I. After Alph. de Candolle had proposed to take the year 1737 as the starting-point of the priority of genera, many botanists had acknowledged it. But we

think that the turning-point from the ancient botany to our modern science rests in the introduction of the binomial nomenclature. Therefore we propose, after a previous communication with Alph. de Candolle, to remove the starting-point for both, the species as well as the genera, as far as to the year 1753, resp. 1752—date of the *Species Plantarum*, first edition (1753), with the fourth edition of the *Genera Plantarum* (1752). Before that time the scientific position of Linnæus is not superior to Tournefort, Rivinus, and many other botanists, who often had described and segregated the genera more exactly than he did.

Ad. II. Many genera have been founded on a picture only, without a diagnosis. No doubt, by means of it a species sometimes can clearly be made out and recognized, and if the picture is a good one all the characteristics of the plant can be observed. But a picture can never show the special characteristics alone which raise the genus above the others of its affinity. A genus only gains priority by a verbal diagnosis, and nomina nuda and seminuda are to be rejected; therefore the following works cannot claim a right of priority: Rumphius, *Herbarium Amboinense* (1741–1755); Burmann, *Flora Indica* (1768); Patr. Browne, *History of Jamaica* (1756); Lamarck, *Illustration des Genres, pro parte*, etc.

Ad. III. There are to be conserved *Adenia* as well as *Adenium*, *Acnista* as well as *Acnistus*, *Alectra* as well as *Alectryon*, *Apios* as well as *Apium*, *Rubia* as well as *Rubus*, *Bellis* as well as *Bellium*, *Chloris* as well as *Chloræa* and *Chlora*, *Glyphæa* as well as *Glyphis* and *Glyphia*, *Calopogon* as well as *Calopogonium*, *Atropa* as well as *Atropis*, *Galax* as well as *Galaxia* and *Galactia*, *Danæ* as well as *Danais*, *Drimia* as well as *Drimys*, *Glechoma* as well as *Glechon*, *Hydrothrix* as well as *Hydrotriche*, *Micranthus* as well as *Micrantheum*, *Microtea* as well as *Microtus*, *Platystemma* as well as *Platystemon*, *Silvæa* as well as *Silvia*, etc.; we doubt that there is any scholar who will confound them. On the

contrary, *Tetraclis* and *Tetracleis*, *Oxythece* and *Oxytheca*, *Epidendrum* and *Epidendron*, *Oxycoccus* and *Oxycoccos*, *Asterocarpus* and *Astrocarpus*, *Peltostema* and *Peltistema*, are only different modes of spelling the same word, and the newer one is to be refused if they name different genera.

Ad. IV. The impulse that led to the acknowledgment of the right of priority was only the vivid desire to create a stable nomenclature. If we see that by the absolute and unlimited observance of the principle we probably gain the contrary of what we intended, we, who have ourselves made the rules of priority as a law, have the right to amend the latter. Therefore we present a list of genera that have more than a merely scientific interest or that are very large, and we propose to conserve them in spite of the rules of priority, in order to avoid a general confusion by the change of many thousand names.

P. ASCHERSON,	} <i>Committee.</i>
A. ENGLER,	
K. SCHUMANN,	
I. URBAN,	

We agree to the four resolutions:

A. H. Berkhout, R. Beyer, C. Bolle, R. Buttner, U. Dammer, B. Frank, A. Garcke, E. Gilg, M. Gurke, P. Hennings, O. Hoffmann, L. Kny, E. Koehne, G. Krabbe, F. Kranzlin, L. Krug, M. Kuhn, G. Lindau, E. Loew, P. Magnus, F. Niedenzu, F. Pax, H. Potonie, O. Reinhardt, R. Ruthe, S. Schwendener, P. Taubert, G. Volkens, O. Warburg, A. Winkler, L. Wittmack, E. Wunschmann.

NUMERUS

SPECIERUM. NOMINA CONSERVANDA.

- 5 *Erophila*, DC. (1821).
50 *Jonidium*, Vent. (1803).
4 *Spergularia*, Pers. (1805).

NOMINA REJICIENDA.

- Gansbium*, Ad. (1763).
Calceolaria, Lofl. (1758).
Tissa, v. Buda, Ad. (1763).

NUMERUS

SPECIERUM. NOMINA CONSERVANDA.

- 40 Ternstroemia, Thbg. (1794).
 80 Malvastrum; A. Gr. (1849).
 11 Cola, Schott et Endl. (1832).
 17 Podalyria, Lam. (1795).
 200 Oxytropis, DC. (1802).
 155 Desmodium, Desv. (1813).
 80 Adesmia, DC (1825).
 55 Barringtonia, Forst. (1775).
 70 Sonerila, Roxb. (1820).
 30 Rhipsalia, Pers. (1805).
 10 Pæderia, Linn. (1767).
 16 Liatris, Schreb. (1791).
 140 Mikania, W. (1803).
 115 Blumea, DC. (1833).
 28 Euryops, Cass. (1818).
 24 Gazania, Gartm. (1791).
 160 Cirsium, Scop. (1761).
 80 Scævola, Linn. (1772).
 50 Aremia, Willd. (1807).
 120 Statice, Willd. (1807).
 3 Chonemorpha, Don. (1837).
 50 Oxypetalum, R. Br. (1809).
 50 Herpestis, Gartn. (1805).
 3 Tectona, L. fil. (1781).
 10 Aerva, Forsk. (1775).
 45 Suæda, Forsk. (1775).
 90 Myristica, L. f. (1781).
 30 Isopogon, R. Br. (1810).
 14 Stenocarpus, R. Br. (1810).
 3 Telotea, R. Br. (1810).
 47 Dryandra, R. Br. (1810).
 24 Leucospermum, R. Br. (1810).
 60 Persoonia, Sm. (1798).
 12 Nivenia, R. Br. (1810).
 70 Leucadendron, R. Br. (1840).
 3 Knightia, R. Br. (1810).
 60 Protea, R. Br. (1810).
 46 Banksia, L. f. (1781).
 10 Sorocephalus, R. Br. (1810).
 9 Lomatia, R. Br. (1810).
 76 Pimelea, Gartn. (1788).

NOMINA REJICIENDA.

- Mokofua, Ad. (1763).
 Malveopsis, Prsl. (1844).
 Edwardia, Raf. (1812).
 Aphora, Neck. (1790).
 Spiesia, Neck. (1790).
 Meibomia, Heist. ex Fabr. (1763).
 Patagonium, Schrk. (1808).
 Huttum, Ad. (1763).
 Cassebeeria, Dennst. (1818).
 Hariota, Ad. (1763).
 Hondbesseion, Ad. (1763).
 Laciniaria, Hill (1762).
 Willoughbya, Neck. (1790).
 Placus, Lour. (1790).
 Jacobæastrum, Man. (1751).
 Meridiana, Hill (1761).
 Cnicus et Carduus, L. (1753 ex p.)
 Lobelia, Ad. (1763).
 Statice, Fabr., etc. (1759).
 Limonium, Fabr. etc. (1759).
 Bellutakaka, Ad. (1763).
 Gothofreda, Vent. (1803).
 Brami, Ad. (1763).
 Theka, Ad. (1763).
 Uretia, Ad. (1763).
 Dondia, Ad. (1763).
 Comacum, Ad. (1763).
 Atylus, Sal. (1807).
 Cybele, Sal. et Kn. (1809).
 Hylogyne, Sal. et Kn. (1809).
 Josephia, Sal. et Kn. (1809).
 Leucadendron, Sal. et Kn. (1809).
 Linkia, Cav. (1797).
 Paranomus, Sal. et Kn. (1809).
 Protea, Sal. et Kn. (1809).
 Rymandra, Sal. et Kn. (1809).
 Gagnedi, Bruce. (1790).
 Sirmullera, O. Ktze. (cf. ap. Pineleam).
 Soranthe, Sal. et Kn. (1809).
 Tricondylus, Sal. et Kn. (1809).
 Banksia, Forst. (1776).

NUMERUS

SPECIERUM. NOMINA CONSERVANDA.

- 20 *Struthiola*, L. f. (1767).
 12 *Exocarpus*, Lab. (1798).
 20 *Julocroton*, Mart. (1837).
 175 *Pilea*, Lindl. (1821).
 330 *Dendrobium*, Sw. (1799).
 30 *Angræcum*, Lindl. (1826).
 40 *Polystachya*, Hook. (1824-25).
 60 *Eulophia*, R. Br. (1823).
 80 *Spiranthes*, Rich. (1818).
 400 *Pleurothallis*, R. Br. (1813).
 120 *Liparis*, Rich. (1818).
 100 *Bolbophyllum*, Spr. (1826).
 85 *Eria*, Lindl. (1825).
 60 *Cœlogyne*, Lindl. (1825).
 8 *Libertia*, Spr. (1825).
 19 *Patersonia*, R. B. (1807).
 5 *Hosta*, Tratt. (1812).
 59 *Haworthia*, Duv. (1824).
 9 *Astelia*, R. Br. (1810).
 36 *Dracæna*, Jurs. (1767).
 22 *Thysanotus*, R. Br. (1810).
 3 *Agapanthus*, l'Herit. (1788).
 30 *Cyanotis*, Don. (1825).
 28 *Dichorisandra*, Mik. (1820).
 40 *Luzula*, DC. (1805).
 60 *Chamædorea*, W. (1804).
 50 *Pandanus*, L. f. (1781).
 20 *Hydrosme*, Schott (1858).
 215 *Pæpalanthus*, Mart. (1833-35).
 200 *Fimbristylis*, Vahl. (1806).
 33 *Rottbœllia*, L. f. (1781).
 20 *Setaria*, Beauv. (1812).
 3 *Phyllocladus*, Rich. (1826).
 40 *Podocarpus*, l'Herit. (1810).

NOMINA REJICIENDA.

- Belvala*, Ad. (1763).
Xylophyllos, L. (1771).
Cicca, Ad. (1763).
Adicea, Raf. (1815).
Callista, Lour. (1790).
Angorchis, Thou. (1809).
Dendrorchis, Thou. (1809).
Graphorchis, Thou. (1809).
Gyrostachys, Pers. (1807).
Humboldtia, R. et P. (1794).
Leptorchis, Thou. (1809).
Phyllorchis, Thou. (1809).
Pinalia, Ham. (Febr. 1825).
Pleione, Don. (Febr. 1825).
Tekel, Ad. (1753).
Genosiris, Lab. (1804).
Saussurea, Salisb. (1807).
Catevala, Ad. (1763).
Funkia, W. (1808).
Draco, Ad. (1763).
Chlamysporum, Salisb. (1809).
Tulbaghia, Heist. (1753).
Tonningia, Neck. (1790).
Stickmannia, Neck. (1790).
Juncodes, Ad. (1763).
Nunnezharia, R. et P. (1794).
Keura, Forsk. (1775).
Corynophallus, Schott (1857).
Dupatya, Vell. (1825).
Iria, Rich. (1805).
Manisuris, L. (1771).
Chamærhaphis, R. Br. (1810).
Podocarpus, Lab. (1806).
Nageia, Gartn. (1788).

At the same time that all this was occurring abroad, the following circular was distributed for signatures in this country:

In view of the International Botanical Congress to be held at Genoa, Italy, Sept. 4 to 11, 1892, we, the undersigned American botanists, favor the adoption of the following general principles of nomenclature:

I. The adoption of initial dates for generic and specific names.

II. That the publication of a generic name or a binomial specific name invalidates the use of the same name for any subsequently published genus or species.

III. That in the transfer of a species to a genus other than the one under which it was first published, the original specific name is to be preserved, unless such name has previously been employed in the genus to which the species is transferred; and if the author who transfers such species alters the name, it may be restored by any subsequent author.

IV. That a varietal name be treated as equal in rank to a specific name, in its relations as a homonym and in the transfer of species and varieties from one genus to another.

At the meeting of the Botanical Club of the A. A. A. S., referred to in our preceding paper, the subject, by a previous general understanding, was taken up for official action by that body. The first step was a non-official conference in the parlors of the Powers Hotel, to which all the botanists known to be present at the meeting were invited. The meeting was largely attended, and the subject very freely discussed. As all present had been for a long time studying the questions involved, the meeting was enabled to result in important conclusions and agreements. Probably the most important conclusion reached was one which had up to that time been found impossible, viz., that no one party must hope that all of its ideas would be adopted by all the others. This fact once fully appreciated, all parties became ready to make reasonable concessions, and for the first time in America the way was made ready for a practical uniformity in botanical nomenclature. A committee was appointed to prepare and print the resolutions

which had been adopted at this informal meeting, and to present the same to the Botanical Club. Upon the following day the Club passed this resolution.

In view of the great desirability of establishing a stable system of botanical nomenclature in North America, I move the appointment of a committee of seven members of the Club, of which the President shall be one, to consider the questions involved, and to submit a set of recommendations to the Club before the close of the present session.

The President appointed the following members to serve on this committee: H. H. Rusby, N. L. Britton, J. M. Coulter, F. V. Coville, L. M. Underwood, L. F. Ward, and W. A. Kellerman.

The report was presented upon the afternoon of Friday, August 19th, and provoked a very long and animated discussion, with the result that the following resolutions were adopted:

Resolved, That the Paris code of 1867 be adopted except where it conflicts with the following:

I. THE LAW OF PRIORITY.—Priority of publication is to be regarded as the fundamental principle of botanical nomenclature.

II. BEGINNING OF BOTANICAL NOMENCLATURE.—The botanical nomenclature of both genera and species is to begin with the publication of the first edition of Linnæus' *Species Plantarum*, in 1753.

III. STABILITY OF SPECIFIC NAMES.—In the transfer of a species to a genus other than the one under which it was first published, the original specific name is to be retained, unless it is identical with the generic name or with a specific name previously used in that genus.

IV. HOMONYMS.—The publication of a generic name or a binomial invalidates the use of the same

name for any subsequently published genus or species respectively.

V. PUBLICATION OF GENERA.—Publication of a genus consists only (1) in the distribution of a printed description of the genus named; (2) in the publication of the name of the genus and the citation of one or more previously published species as examples or types of the genus, with or without a diagnosis.

VI. PUBLICATION OF SPECIES.—Publication of a species consists only (1) in the distribution of a printed description of the species named; (2) in the publishing of a binomial, with reference to a previously published species as a type.

VII. SIMILAR GENERIC NAMES.—Similar generic names are not to be rejected on account of slight differences, except in spelling of the same word; for example, *Apios* and *Apium* are to be retained, but of *Epidendrum* and *Epidendron*, *Asterocarpus* and *Astrocarpus*, the latter is to be rejected.

VIII. CITATION OF AUTHORITIES.—In the case of a species which has been transferred from one genus to another, the original author must always be cited in parentheses, followed by the author of the new binomial.

Resolved, That the Committee on Nomenclature be continued as a permanent committee of the Club or Botanical Section of the A. A. A. S., to prepare and print a list of flowering plants within the area of the sixth edition of Gray's Manual, in accordance with these recommendations.

(Amended Aug. 22d, increasing the area by including the States of Kansas and Nebraska, and the Canadian Provinces from Manitoba to Newfoundland.)

Resolved, That this Committee be empowered to receive all suggestions and criticisms of this list, and to report upon the matter at the next meeting of the Club or Botanical Section.

Resolved, That Dr. Lucien M. Underwood be delegated to represent this Association of American Botan-

ists at the International Botanical Congress to be held at Genoa, Italy, Sept. 4 to 11, 1892.

That a committee of three be appointed to obtain funds by subscription to defray the expenses of the delegate. [The Chairman appointed Dr. J. M. Coulter, Dr. W. P. Wilson, and Dr. E. F. Smith.]

The action which has been reported above may be considered as having established a custom in America which will become well-nigh uniform, and the influence of which extends even beyond the circle of those (nearly all our American botanists) who definitely subscribed to the rules. That is, it has made apparent the earnestness and the sincerity of those taking part in the movement, and their readiness to make all reasonable concessions for the sake of the important object of securing uniformity. Necessarily, therefore, it enlists the sympathies even of those few who did not see their way clear to consistently become parties to the contract, and makes them ready to at least enter into the spirit of the movement, and to do as little as possible toward interfering with harmonious action. Indeed, it is the general promotion of this spirit which may be considered as the most important outcome of the Rochester meeting.

It will be observed that Prof. Underwood was appointed a committee to report the Club and its views at the subsequent meeting to be held at Genoa. This meeting Prof. Underwood attended, and his report was printed in full in the *Bulletin of the Torrey Botanical Club* for November, p. 325. In a few words the result of Prof. Underwood's mission may be stated as follows: The first three propositions of the *Berlin* circular above printed were adopted, with the important amendment that the congress adopt the resolution of the *Rochester*

convention, that the starting-point for both genera and species should be the first edition of Linné's *Species Plantarum*, or the year 1753. An agreement could not be reached upon the fourth proposition of the Berlin circular; and to consider this as well as other important points covered in the Rochester resolutions, and to report upon the same at a future date, the following International standing Committee was appointed:

Prof. P. Ascherson, Berlin.	Prof. E. L. Greene, Berkeley, California.
Prof. H. Baillon, Paris.	J. A. Henriques, Coimbra.
J. G. Baker, Kew.	Sir J. D. Hooker, Kew.
Prof. A. Batalin, St. Petersburg.	Prof. A. Kerner von Marilann.
Prof. N. L. Britton, New York.	Prof. F. Krasan, Graz.
Ed. Bureau, Paris.	Joh. Lange, Copenhagen.
A. de Candolle, Geneva.	— Malinwand, Paris.
Prof. T. Caruel, Florence.	Dr. Fr. Muller, Varel.
Prof. L. Celakovsky, Prague.	— Perez-Lara.
Baron C. B. Clarke, Kew.	Prof. L. Radlkofer, Munich.
F. Crepin, Brussels.	Prof. P. A. Saccardo, Padua.
Prof. J. M. Coulter, Bloomington, Indiana.	Prof. J. Schmalhausen, Kew.
Th. Durand, Brussels.	— Suringar.
A. Engler, Berlin.	Prof. M. Willkomm, Prague.
Th. Fries, Stockholm.	Prof. V. B. Wittrock, Stockholm.

An important portion of Prof. Underwood's report was the following: "Later conversation at Kew convinced me that the English botanists will accede to any reasonable standard that promises uniformity and fixity." It will thus be clear to all readers of the BULLETIN OF PHARMACY that there is every reasonable prospect that in the near future the botanists of the world will be united upon a system of nomenclature which will be considered as to a certain extent binding, at least for a generation. At the present time we may consider the year of starting as definitely fixed. Undoubtedly there will be some botanists who, unwilling to concede any-

thing, will still adhere to a prior date. As to whether or not this is a misfortune, we do not express an opinion; but its effect in demoralizing custom and promoting inconvenience will not, it is believed, be very great. Under any circumstances, American botanists have something upon which they can rely in the writing of botanical names, with at least a showing of authority.

A SUPPLEMENT TO THE REVISION OF THE BOTANICAL
NAMES OF THE U. S. PHARMACOPŒIA PRINTED IN
THE BULLETIN OF PHARMACY FOR JULY, 1892

BY H. H. RUSBY, M.D.

The two reports which have just preceded make sufficiently plain the necessity for a substitution of names in those cases where the names adopted in my last paper were not the ones first printed subsequent to the beginning of the year 1753, which has now been adopted as the initial date for both genera and species. At the same time occasion is taken to add a few decisions which I was not prepared to make at the time of writing that paper, as well as to correct a few errors which have since been noted. For information and suggestions given me, I am indebted to Prof. J. M. Maisch, Prof. E. M. Holmes, Prof. W. G. Farlow, and Prof. B. Daydon Jackson.

ASAFŒTIDA.—Mr. E. M. Holmes informs me that Mr. Aitchison proposes immediately to travel over the region where Kaempfer collected the specimens referred to in my last, and that he will then endeavor to re-collect the species so as to determine positively whether the plant upon which Linné founded his name *Ferula Asafœtida* is really the one which yields our commercial gum resin of that name. I agree with Mr. Holmes that until this has been done it will be best for

us to retain the name adopted in my last. It appears, however, that Messrs. Bentham and Hooker were not the first to use the binomial, it having been employed by Regel. The name will therefore stand *Ferula fetida* (Bunge), Regel.

ASPIDIUM.—From *Dryopteris filix mas*, Schott, Gen. Fil. (1834); and from *Dryopteris marginale*, Asa Gray, Manual, ed. 1.

Synonym: *Polypodium Felix-famina*, L., Sp. Pl., ed. 1, p. 1551 (1753) +

Although the genus *Dryopteris* dates from Amman (1739), long before the earliest date that we are permitted to recognize, yet within our limit it was also the first name used for the genus which we have been calling *Aspidium*, being cited by Adamson in 1763.

CETRARIA.—The history of this name I am now able to give as follows: From *Cetraria Islandica* (L.), Acharius, Lich. Univ., 512 (1810).

Synonym: *Lichen Islandica*, L., Sp. Pl., p. 1145 (1753) +

CHONDRUS.—From *Chondrus crispus*, Stackhouse, Ner. Brit., ed. 1, p. 24 (1801), *vide* W. G. Farlow, *in litt.* The *Fucus crispus* of Linné, Mant., p. 134 (1767), is not now regarded as being identical with our plant.

Also from *Gigartina mamillosa*, Agardh., Phyc. Brit. Pl., 199.

CHRYSAROBINUM.—From *Andira ararobe*, Aguiar, Mem. sob. a Araroba (1879).

CIMICIFUGA.—From *Cimicifuga racemosa* (L.), Nutt., Gen., li, p. 15 (1818).

The use of *Thalictrodes* (1739) is no longer admissible under our rules.

CINCHONA.—Our new date kills Condamine's name *Quinquina* and permits us to retain the name *Cinchona*.

COLOCYNTHIS.—The same change in date throws out the generic name *Colocynthis* (1745) and installs Forskal's *Citrullus*, and the name *Citrullus colocynthis*, Schrad., becomes the correct botanical name.

COPAIBA.—Through a mere oversight in my last, I failed to say, "and from other species of *Copaiba*." The change of date does not affect the correctness of the generic name *Copaiba*, which was the first one used within our limit, viz., by Jaquin in 1760. (Enum., pp. 4 and 21.)

ERGOTA.—From *Claviceps purpurea* (Fr.), Tul., Ann. Sci. Nat., xx, t. 3 (1853).

Synonym: *Sphaeria purpurea*, Fr., Syst. Myc., ii, p. 325 (1823).

ERYTHROXYLON.—A number of distinct names have been recently proposed in pharmaceutical literature for the supposed species or varieties yielding the various commercial varieties of this drug. It does not, however, seem to me wise to adopt any of these names at the present time. The most careful investigations which I have been able to make concerning the Coca plant leave me entirely in doubt as to the botanical relations of the several known forms. In addition to this, the proposed names seem to have been selected without regard to any rules of nomenclature. I cannot, therefore, at the present time, do otherwise than to refer all forms to the one species, *E. coca*, Lam.

FÆNICULUM.—Duplicate names having now happily been excluded, we are able to adopt for this plant the name *Feniculum capillaceum*, Gilib.

GAULTHERIA.—Our changed date does away with the name *Brossæa*, restoring the name as it appears in the present edition of the U. S. Pharmacopœia.

HAMAMELIS.—A wrong citation was given in my last. The name first appeared in Sp. Pl., ed. i, p. 124 (1753) *H. Virginiana*.

HEDEOMA.—The date of this name should have been given as 1805 instead of 1867.

ILLICIIUM.—From *Illicium verum*, Hook. f., Bot. Mag., t. 7008 (July, 1888). It now seems pretty clearly established that the specimens from which Linné described his *I. anisatum* did not represent the plant which yields the officinal Star-anise, but the poisonous variety of Japan, so that the name *I. religiosum*, Sieb and Zucc., is really a mere synonym of *I. anisatum*. The genuine Star-anise tree, therefore, actually never possessed a name until that given it by Hooker as above cited.

IPECACUANHA.—The adoption in my last of the specific name "emetica" was an error, for "Ipecacuanha" had been used in 1802, three years earlier. The correct name is therefore *Cephalis Ipecacuanha*, (Brot.), A. Rich., etc. +

Synonym: *Callicocca Ipecacuanha*, Brotero, Trans. Lin. Soc., vi, p. 137 (1802) +

Nuttall

JALAPA.—From *I. Jalapa*, ~~Coxe~~, Journ. Amer. Med. Sci. for 1829, v., p. 300 (published Feb., 1830) + This reference was kindly furnished me by Prof. Maisch. It is therefore clear that *I. jalapa*, Don., was some years later. Mr. B. Daydon Jackson has very kindly looked up for me the publication of *I. purga*, Hayne, and finds it to have been in the year 1833. It is therefore entirely clear that Coxe's name is the oldest by three years.

KINO.—The name Lingoum is thrown out by our change of rule, and the name remains as before; *Pterocarpus Marsupium*, Roxb.

LAPPA.—To the name as published add, "and other species of *Arctium*." It now appears pretty clear that the European Burdock represents three distinct species, and it seems extremely probable that all of them yield the commercial root.

LOBELIA.—In my last the place of publication was wrongly given. It should have been Sp. Pl., ed. i, p. 931 (1753) +

MACIS (and MYRISTICA).—The generic name Palala must now be rejected, so that the name is correct in the present edition of the U. S. P.

OLEUM CAJUPUTI.—Likewise must we reject the name Myrtleu-codendron, leaving the name correct as it now appears in the U. S. P.

PILOCARPUS.—From *Pilocarpus Selloanus*, Engler, Fl. Bras., xii, part 2, p. 136 + (Rio Janeiro Jaborandi), and from *P. Jaborandi*, Holmes Ms. (Pernambuco Jaborandi). It appears that the genuine *P. pennatifolius*, Lem., is from Paraguay only, whence we do not receive any commercial leaves. That species therefore must be excluded as a source of Jaborandi. Specimens of the Pernambuco Jaborandi received by Mr. Holmes confirm his previous opinion that they come from an undescribed species, which therefore he proposes to publish under the above name.

PIX BURGUNDICA.—We shall now be able to write *Abies excelsa*, Poir, in Lam. Dict., vi, p. 316 (1804) +

SANTALUM RUBRUM.—The name as printed in the present edition of the U. S. P. will now be correct.

SASSAFRAS.—The exclusion of the double name will now require us to write *Sassafras variifolium* (Salisb.), O. Kunze, Rev.

Gen. Pl., p. 574 (1891) + The specific name "officinalis" was first used by Nees in 1836, while Salisbury's *variifolium* dates from 1796.

SERPENTARIA.—It seems worth while to note that the rhizome of *A. Serpentaria*, L., is now scarcely known in commerce, practically the whole of our drug coming from *A. reticulata*, Nutt.

USTILAGO.—From *Ustilago Maidis* (DC.), Corda, Ic. Fung., v, p. 3 (1842).

Synonym: *Uredo maidis*, DC., Fl. Franc., vi, p. 77 (1815) +

XANTHOXYLUM.—A question has been raised by Prof. Maisch concerning the identity of the West Indian and the United States plants which have gone by the name *Xanthoxylon Clava-Herculis*. Prof. Maisch is undoubtedly correct in declaring that the two species are not identical. It is, moreover, a nice question as to which of the two species is correctly entitled to bear the above name. A most careful consideration of all the facts compels us to the view that the name properly belongs to the plant of the United States, as printed in my preceding paper.

